

Figure 1 Schematic diagram of the PCD with the main apparatus components

- a) natural gas
- b) blower
- c) burner
- d) compressed air
- e) ambient air
- f) exhaust blower
- g) exhaust air
- h) cooling water (in/out)
- i) filter
- j) cyclone
- k) feed liquid
- l) feed pump
- m) drying chamber
- n) product discharge

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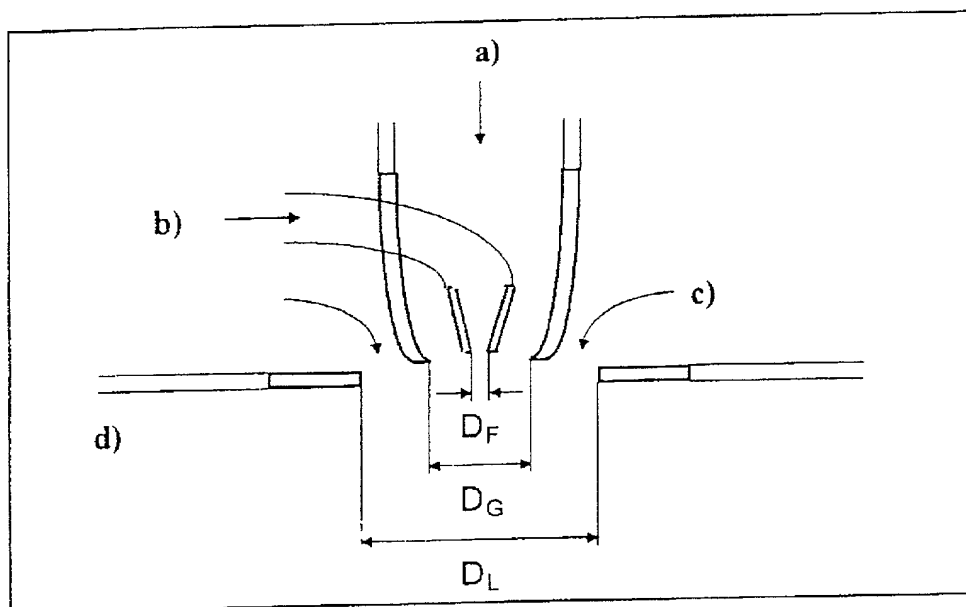


Figure 2 Arrangement of the gas nozzle, the liquid nozzle and the air ring in an experimental apparatus

- a) combustion gas
- b) suspension
- c) ambient air
- d) drying chamber

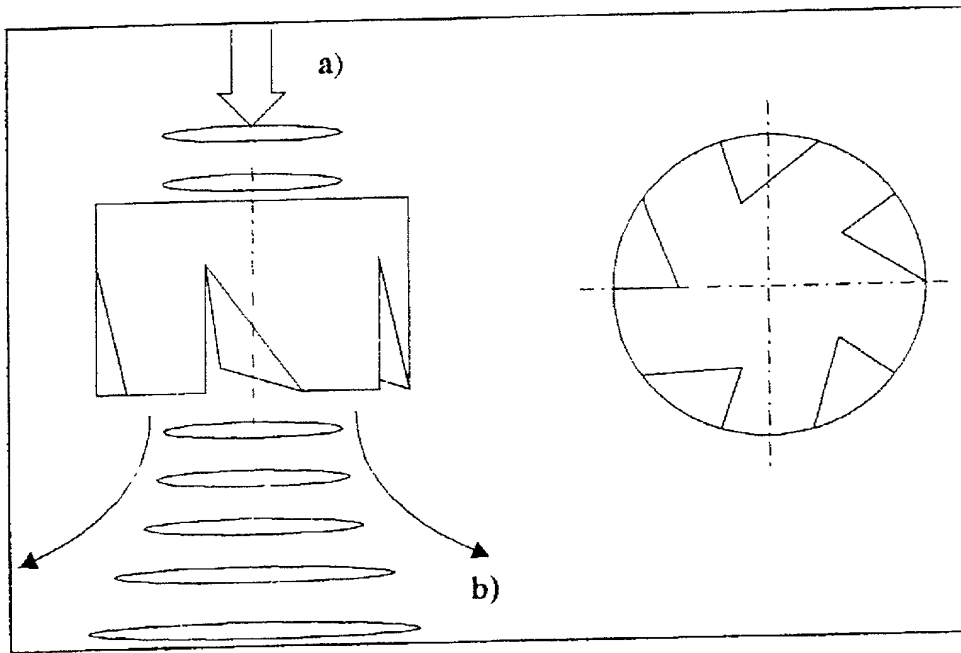


Figure 3 In-principle sketch of the swirl-inducing element

- a) hot gas stream
- b) jets widening on entry into the drying chamber

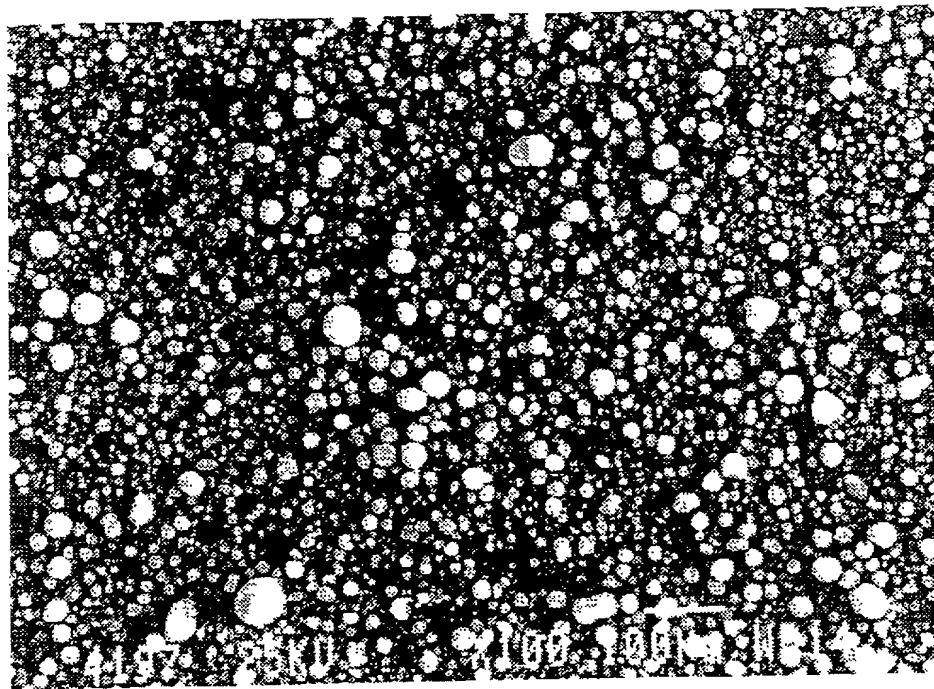


Figure 4 Scanning electron micrograph of precipitated silica dried in the pulse combustion dryer

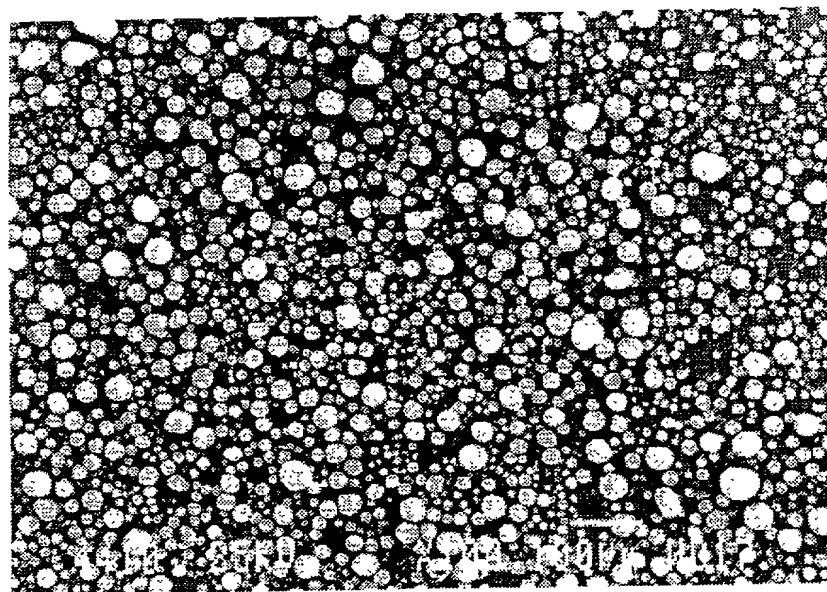


Figure 5 Scanning electron micrograph of pyrogenic silica dried in the pulse combustion dryer

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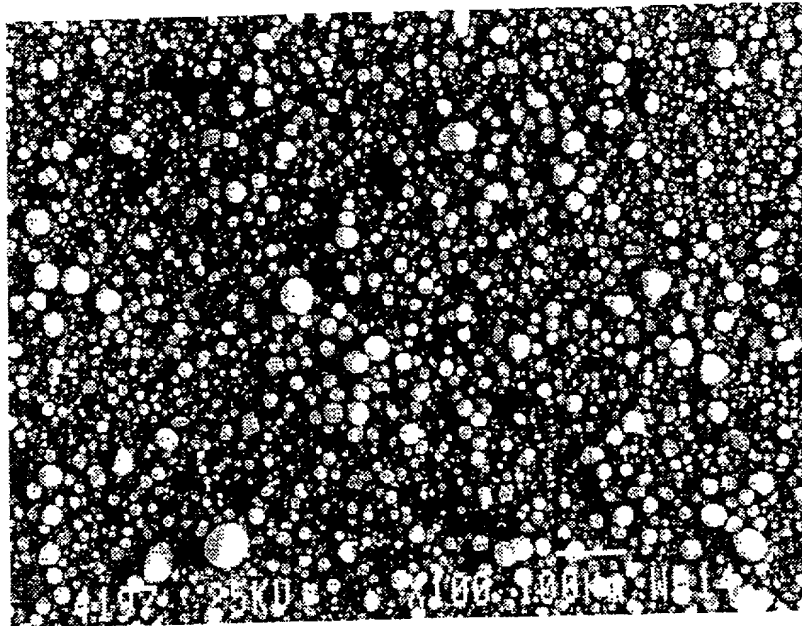


Figure 6 Scanning electron micrograph of precipitated silica dried in the pulse combustion dryer

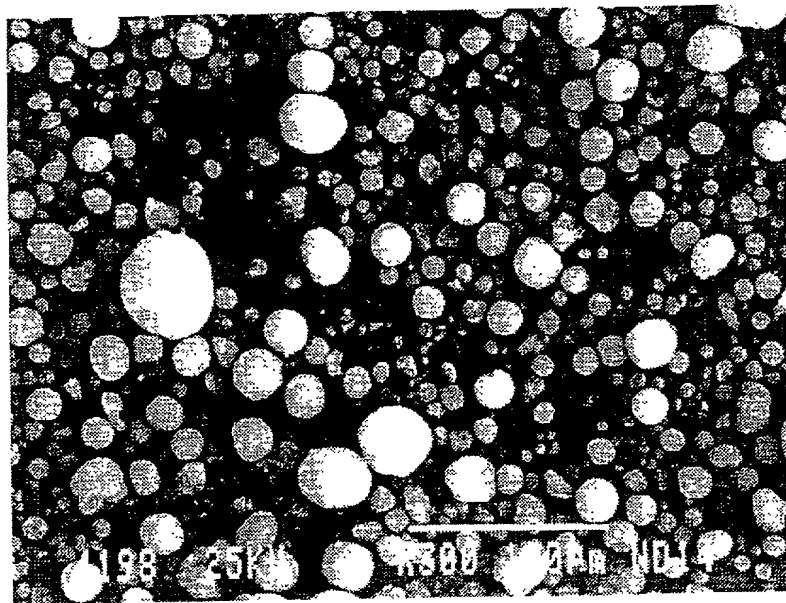


Figure 7 Scanning electron micrograph of precipitated silica dried in the pulse combustion dryer

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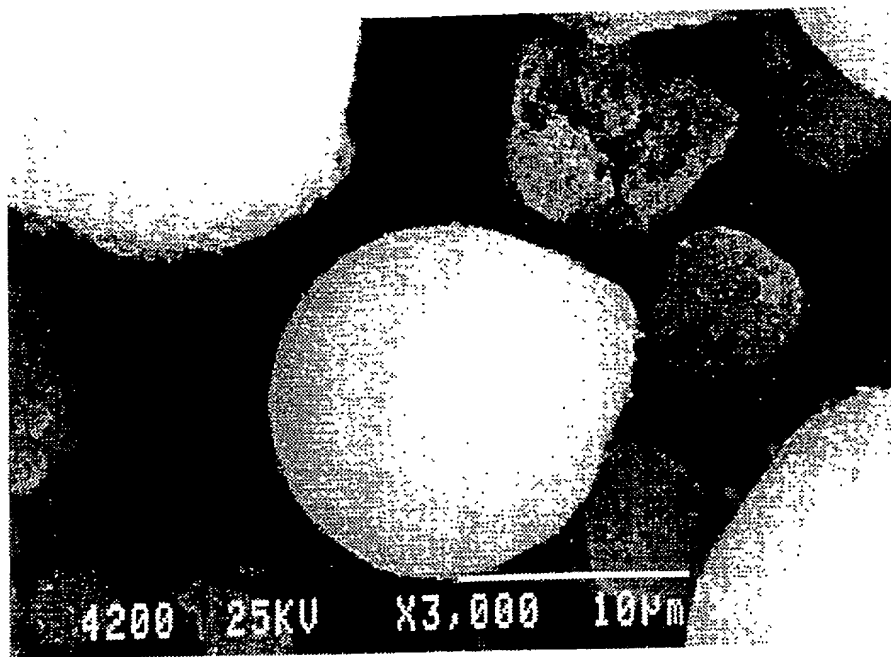


Figure 8 Scanning electron micrograph of precipitated silica dried in the pulse combustion dryer

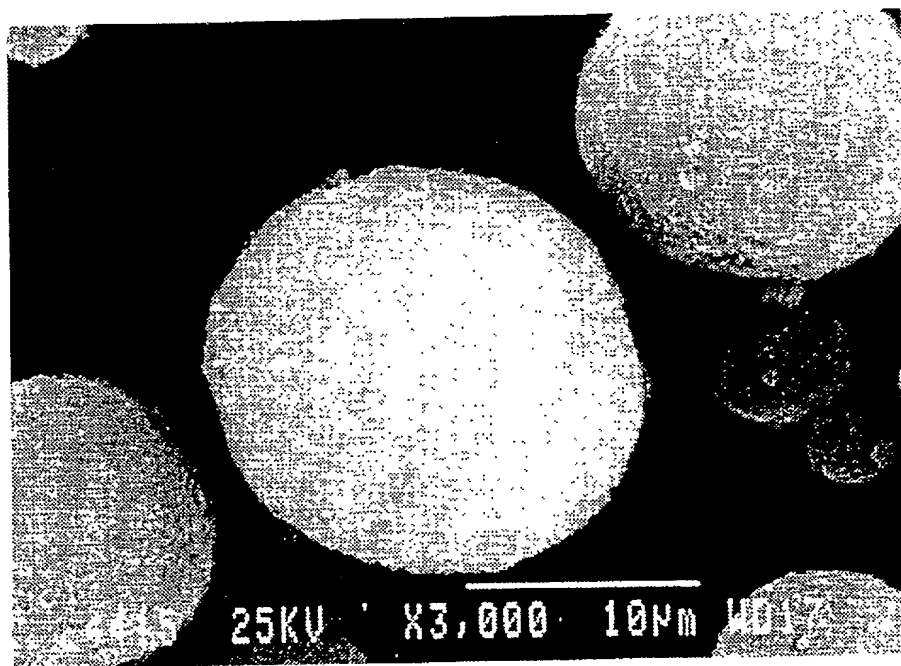


Figure 9 Scanning electron micrograph of pyrogenic silica dried in the pulse combustion dryer

10067844.020802

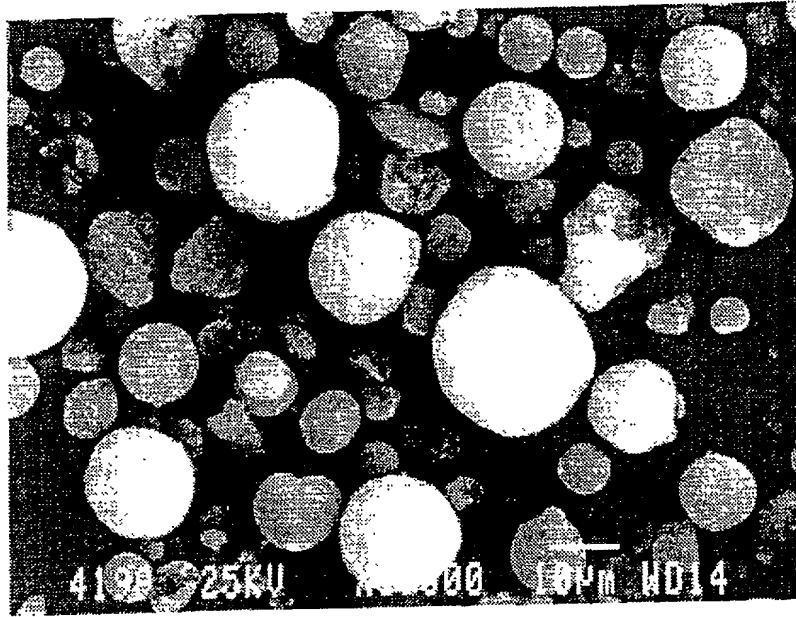


Figure 10 Scanning electron micrograph of precipitated silica dried in the pulse combustion dryer

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Determination of the wk coefficient

